

[MICROINJECTOR FOR JETTING DROPLETS OF DIFFERENT SIZES]

Abstract of Disclosure

A microinjector uses bubbles as virtual valves to eject droplets of different sizes. The microinjector is in fluid communications with a reservoir and has a substrate, an orifice layer, and a plurality of nozzles. The substrate has a manifold for receiving ink from the reservoir. The orifice layer is positioned on the top of the substrate so that a plurality of chambers are formed between the orifice layer and the top of the substrate. Each of the nozzles has an orifice and at least three bubble generating components. The bubble generating components are selectively driven by a driving circuit so that each nozzle can eject droplets of different sizes.

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Variable	Mean	Standard deviation	Minimum	Maximum
Age	34.5	10.2	20	55
Gender	0.5	0.5	0	1
Marital status	0.7	0.5	0	1
Education	12.5	1.5	10	15
Income	1500	500	1000	2500
Health status	0.8	0.4	0	1
Employment status	0.6	0.5	0	1
Home ownership	0.9	0.3	0	1
Vehicle ownership	0.7	0.4	0	1
Life satisfaction	4.5	1.5	1	7
Life expectancy	75	5	60	90
Healthcare expenditure	1000	300	500	2000
Life expectancy at birth	75	5	60	90
Life expectancy at age 65	15	3	10	20
Life expectancy at age 75	8	2	5	12
Life expectancy at age 85	4	1	2	6
Life expectancy at age 95	2	1	1	3
Life expectancy at age 105	1	1	0	2
Life expectancy at age 115	0.5	0.5	0	1
Life expectancy at age 125	0.2	0.2	0	0.5
Life expectancy at age 135	0.1	0.1	0	0.2
Life expectancy at age 145	0.05	0.05	0	0.1
Life expectancy at age 155	0.02	0.02	0	0.05
Life expectancy at age 165	0.01	0.01	0	0.02
Life expectancy at age 175	0.005	0.005	0	0.01
Life expectancy at age 185	0.002	0.002	0	0.005
Life expectancy at age 195	0.001	0.001	0	0.002
Life expectancy at age 205	0.0005	0.0005	0	0.001
Life expectancy at age 215	0.0002	0.0002	0	0.0005
Life expectancy at age 225	0.0001	0.0001	0	0.0002
Life expectancy at age 235	0.00005	0.00005	0	0.0001
Life expectancy at age 245	0.00002	0.00002	0	0.00005
Life expectancy at age 255	0.00001	0.00001	0	0.00002
Life expectancy at age 265	0.000005	0.000005	0	0.00001
Life expectancy at age 275	0.000002	0.000002	0	0.000005
Life expectancy at age 285	0.000001	0.000001	0	0.000002
Life expectancy at age 295	0.0000005	0.0000005	0	0.000001
Life expectancy at age 305	0.0000002	0.0000002	0	0.0000005
Life expectancy at age 315	0.0000001	0.0000001	0	0.0000002
Life expectancy at age 325	0.00000005	0.00000005	0	0.0000001
Life expectancy at age 335	0.00000002	0.00000002	0	0.00000005
Life expectancy at age 345	0.00000001	0.00000001	0	0.00000002
Life expectancy at age 355	0.000000005	0.000000005	0	0.00000001
Life expectancy at age 365	0.000000002	0.000000002	0	0.000000005
Life expectancy at age 375	0.000000001	0.000000001	0	0.000000002
Life expectancy at age 385	0.0000000005	0.0000000005	0	0.000000001
Life expectancy at age 395	0.0000000002	0.0000000002	0	0.0000000005
Life expectancy at age 405	0.0000000001	0.0000000001	0	0.0000000002
Life expectancy at age 415	0.00000000005	0.00000000005	0	0.0000000001
Life expectancy at age 425	0.00000000002	0.00000000002	0	0.00000000005
Life expectancy at age 435	0.00000000001	0.00000000001	0	0.00000000002
Life expectancy at age 445	0.000000000005	0.000000000005	0	0.00000000001
Life expectancy at age 455	0.000000000002	0.000000000002	0	0.000000000005
Life expectancy at age 465	0.000000000001	0.000000000001	0	0.000000000002
Life expectancy at age 475	0.0000000000005	0.0000000000005	0	0.000000000001
Life expectancy at age 485	0.0000000000002	0.0000000000002	0	0.0000000000005
Life expectancy at age 495	0.0000000000001	0.0000000000001	0	0.0000000000002
Life expectancy at age 505	0.00000000000005	0.00000000000005	0	0.0000000000001
Life expectancy at age 515	0.00000000000002	0.00000000000002	0	0.00000000000005
Life expectancy at age 525	0.00000000000001	0.00000000000001	0	0.00000000000002
Life expectancy at age 535	0.000000000000005	0.0000		